

Thermo Scientific™ TSX Series Ultra-Low Freezers



Designed to meet the highest protection and sustainability standards for ultra-low storage

-  **Best peak variation of energy-efficient ultra-low freezers:** less than 5°C
-  **Fastest door opening recovery on the market:** 17 minutes
-  **Best overall temperature uniformity:** < 5.2°C with door openings, < 4.0°C with no door openings
-  **Long warm-up time** from -80°C to -50°C at 5.05 hours
-  **Four capacities:** 400, 500, 600 and 700 2-inch box
-  **5 year standard warranty** plus 7 additional years on V-drive compressors
-  **Real-time monitoring system** with Thermo Scientific™ DeviceLink™



*Restrictions and exclusions apply. Warranty is void if the unit is not maintained as set forth in the operation and service manuals.

Designed to keep samples safe

- Low peak variation protects samples throughout the entire freezer cabinet¹
- V-Drive technology with adaptive control is designed to detect high and low usage patterns, adjust compressor speeds, and reduce energy without compromising protection
- Records temperature and events for the lifetime of the freezer
- No expensive, free-piston engines to repair
- Backed by our Global Service and Support Team

Designed to limit environmental impact and protect your budget

- Reduce energy usage up to 70% by replacing an older ultra-low freezer with a new TSX²
- Uses less than 8 kWh/day, depending on size
- Produces less environmental heat emissions and lowers HVAC costs
- SNAP compliant, natural hydrocarbon refrigerants
- SNAP compliant, environmentally-friendly, water-blown foam insulation
- Manufactured in an award-winning,³ zero-waste to landfill facility

User-friendly design and lab footprint

- All new freezer and user interface design
- Available in four sizes
- Quiet enough to reside directly in the laboratory. At just 45.5 dBA, the sound is comparable to a home refrigerator
- Advanced security features



All data based on internal data unless otherwise noted. Data on file.

1. Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C. Performance data varies across freezer size and electrical specifications.
 2. For energy savings up to 70% at -80°C set point, reference info was: 8.7 kWh/day TSX600 compared >5 year large ULT 31.9 kWh/day energy calculator. At -70°C set point, reference info was: 7.9 kWh/day TSX600 compared >5 year large ULT 31.9 kWh/day energy calculator.
 3. *Industry Week* Best Plant Award, 2013. <http://www.industryweek.com/quality/2013-iw-best-plants-winner-thermo-fisher-scientific-growing-quality-culture-lab>

User friendly touch-screen interface and cabinet

- NEW! Easy-to-use** set-up wizard, event log, temperature mapping and data downloads
- NEW! Capacitive touch** – even when using latex gloves
- Eliminate the need for a separate chart recorder** with datalogging and temperature mapping features, all exportable via a built-in USB port
- Advanced security features:** alarm settings, padlock-compatible doors and optional access card entry
- DeviceLink™ monitors system status** with 24-7 alarm, temperature, and system health notification capability via InstrumentConnect™ mobile and web platforms*
- Ergonomic design:** comfortable door handle, eye-level touch-screen and shelf-level placement that doesn't require floor-level loading of racks
- Four capacities** (400, 500, 600 and 700 2-inch box) to accommodate a variety of storage needs and lab footprint specifications



*DeviceLink™ Wi-Fi technology not available in all regions. Applicable Networks include: WPA2-PSK, WPA-PSK, WEP, WPA2-EAP-PEAP, WPA-EAP-PEAP.

Specifications & Ordering Information

Thermo Scientific TSX Series Upright Freezers (-50°C to -86°C)

Model Number	Capacity		Electrical	Amps / Breaker (Plug)	Max. Shelf Weight lbs (kg)	Interior Dimensions H x W x D in (cm)	Exterior Dimensions H x W* x D in (cm)	Shipping Weight lbs (kg)
	cu. ft. (liters)	2" cryobox						
TSX40086A	19.4	400	115V / 60Hz	9.0/15 (NEMA 5-15)	165	51.2 x 23.1 x 28.3	78.0 x 28.3 x 37.6	665 (302)
TSX40086D	(549)		208-230V / 60Hz	4.0/10 (NEMA 6-15)	(75)	(130.1 x 58.8 x 71.9)	(198.1 x 71.9 x 95.5)	640 (290)
TSX50086A	24.1	500	115V / 60Hz	9.5/15 (NEMA 5-15)	205	51.2 x 28.8 x 28.3	78.0 x 34.0 x 37.6**	721 (327)
TSX50086D	(682)		208-230V / 60Hz	5.1/10 (NEMA 6-15)	(93)	(130.1 x 73.0 x 71.9)	(198.1 x 86.4 x 95.5)	696 (316)
TSX60086A	28.8	600	115V / 60Hz	8.5/15 (NEMA 5-15)	245	51.2 x 34.4 x 28.3	78.0 x 39.6 x 37.6**	790 (358)
TSX60086D	(816)		208-230V / 60Hz	4.0/10 (NEMA 6-15)	(111)	(130.1 x 87.3 x 71.9)	(198.1 x 100.6 x 95.5)	765 (347)
TSX70086A	33.5	700	115V / 60Hz	10.6/15 (NEMA 5-15)	285	51.2 x 40.0 x 28.3	78.0 x 45.2 x 37.6**	894 (406)
TSX70086D	(949)		208-230V / 60Hz	5.8/10 (NEMA 6-15)	(129)	(130.1 x 101.6 x 71.9)	(198.1 x 114.8 x 95.5)	869 (394)

* Allowance for handle and hinge, add 4.2 in (10.7 cm) to cabinet width

** Doorway width clearance is 34.5 in (87.6 cm) for TSX50086, TSX60086, and TSX70086

Performance Data

Model Number	Energy Consumption (kW-hr/day)* Standard Mode	Peak Variation from -80°C setpoint (°C)**	Door Opening Recovery (minutes)	Warm Up Time (-80°C to -50°C) (minutes)***	Noise Level (dBA)
TSX40086A	8.3	+6.0 / +1.1	17	267	47.5
TSX40086D	7.9				
TSX50086A	8.7	+7.1 / +0.4	24	282	49.0
TSX50086D	8.3				
TSX60086A	9.4	+6.9 / +1.8	24	303	45.5
TSX60086D	8.7				
TSX70086A	10.4	+7.0 / +1.6	27	282	48.0
TSX70086D	9.6				

* Energy Calculation: Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C

** Peak Variation From Setpoint: Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C

*** Warm Up Time: Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C



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Options and Accessories (Field Installed must be installed by a qualified professional)

Options	Installation	TSX40086	TSX50086	TSX60086	TSX70086
LN2 Backup System Maintains temperature down to -80°C with liquid nitrogen.	Factory	LN4567	LN4567	LN4567	LN4567
	Field	FLN4567LE	FLN4567LE	FLN4567LE	FLN4567LE
CO2 Backup System Maintains temperature down to -67°C with CO2.	Factory	CO4567	CO4567	CO4567	CO4567
	Field	FCO4567LE	FCO4567LE	FCO4567LE	FCO4567LE
Chart Recorder (Inkless) 6" (15.2 cm), seven day inkless recorder, -115° to +50°C, +5°C resolution	Factory	CR4567	CR4567	CR4567	CR4567
	Field	FCR400TSXLE	FCR500TSXLE	FCR600TSXLE	FCR700TSXLE
Chart Recorder (Ink) 6" (15.2 cm), seven day ink recorder, -100° to +38°C, +2°C resolution	Factory	CRP4567	CRP4567	CRP4567	CRP4567
	Field	FGRP400TSXLE	FGRP500TSXLE	FGRP600TSXLE	FGRP700TSXLE
Access Key Option Card Access control. Includes five key cards. Supports ISO15693 and ISO14443 protocols.	Factory	RAC34567	RAC34567	RAC34567	RAC34567
	Field	FAC34567LE	FAC34567LE	FAC34567LE	FAC34567LE
Stainless Steel Freezer Interior	Factory	SS34567	SS34567	SS34567	SS34567
Twist Lock Plug NEMA L5-20P for 115V / 60Hz	Factory	US125V20ATL	US125V20ATL	US125V20ATL	US125V20ATL
	Field	TL125V20A	TL125V20A	TL125V20A	TL125V20A
Twist Lock Plug NEMA L6-15P for 208-230V / 60Hz	Factory	US230V15ATL	US230V15ATL	US230V15ATL	US230V15ATL
	Field	TL230V15A	TL230V15A	TL230V15A	TL230V15A
Twist Lock Plug NEMA L6-20P for 208-230V / 60Hz	Factory	US230V20ATL	US230V20ATL	US230V20ATL	US230V20ATL
	Field	TL230V20A	TL230V20A	TL230V20A	TL230V20A
Shelf Kit: Includes one shelf and shelf support clips	Factory	TSX5SHELFOPTION	TSX5SHELFOPTION	TSX5SHELFOPTION	TSX5SHELFOPTION
	Field	SK400TSX	SK500TSX	SK600TSX	SK700TSX
Accessories		TSX40086	TSX50086	TSX60086	TSX70086
Access Key Pack (U.S.): Includes five key cards. Supports ISO15693 protocol		ACU34567	ACU34567	ACU34567	ACE34567
Chart Paper Ink (Pack of 50)		17020	17020	17020	17020
Chart Paper Inkless (Pack of 50)		6185	6185	6185	6185
Replacement Air Filter		AF34567LE	AF34567LE	AF34567LE	AF34567
Replacement Back-Up Battery		400159	400159	400159	400159
Alarm Delay Module: Eliminates nuisance alarms due to intermittent or transitory conditions. Adjustable delay requires alarm condition to exist for user defined period before signal is released to monitoring system.		6903	6903	6903	6903
Cryo Gloves Medium		4425	4425	4425	4425
Cryo Gloves Large		4426	4426	4426	4426
Seismic Restraint Kit		TF-ULT400	TF-ULT500	TF-ULT600	TF-ULT700

* A = 115V/60Hz (NEMA 5-20 plug)

** D = 208-230V/60Hz (NEMA 6-15 plug)

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Packages

TSX with two shelves of sliding drawer racks, including boxes					
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*
TSX40086ARAK	400 box	19.4	115V	8	200
TSX40086DRAK	400 box	19.4	208-230V	8	200
TSX50086ARAK	500 box	24.1	115V	10	250
TSX50086DRAK	500 box	24.1	208-230V	10	250
TSX60086ARAK	600 box	28.8	115V	12	300
TSX60086DRAK	600 box	28.8	208-230V	12	300
TSX70086ARAK	700 box	33.5	115V	14	350
TSX70086DRAK	700 box	33.5	208-230V	14	350

TSX with factory-installed LN2 back-up, two shelves of sliding drawer racks, including boxes					
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*
TSX40086ARAKLN	400 box	19.4	115V	8	200
TSX40086DRAKLN	400 box	19.4	208-230V	8	200
TSX50086ARAKLN	500 box	24.1	115V	10	250
TSX50086DRAKLN	500 box	24.1	208-230V	10	250
TSX60086ARAKLN	600 box	28.8	115V	12	300
TSX60086DRAKLN	600 box	28.8	208-230V	12	300
TSX70086ARAKLN	700 box	33.5	115V	14	350
TSX70086DRAKLN	700 box	33.5	208-230V	14	350

TSX with factory-installed CO2 back-up, two shelves of sliding drawer racks, including boxes					
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*
TSX40086ARAKCO	400 box	19.4	115V	8	200
TSX40086DRAKCO	400 box	19.4	208-230V	8	200
TSX50086ARAKCO	500 box	24.1	115V	10	250
TSX50086DRAKCO	500 box	24.1	208-230V	10	250
TSX60086ARAKCO	600 box	28.8	115V	12	300
TSX60086DRAKCO	600 box	28.8	208-230V	12	300
TSX70086ARAKCO	700 box	33.5	115V	14	350
TSX70086DRAKCO	700 box	33.5	208-230V	14	350

TSX with factory-installed chart recorder, two shelves of sliding drawer racks, including boxes					
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*
TSX40086ARAKCR	400 box	19.4	115V	8	200
TSX40086DRAKCR	400 box	19.4	208-230V	8	200
TSX50086ARAKCR	500 box	24.1	115V	10	250
TSX50086DRAKCR	500 box	24.1	208-230V	10	250
TSX60086ARAKCR	600 box	28.8	115V	12	300
TSX60086DRAKCR	600 box	28.8	208-230V	12	300
TSX70086ARAKCR	700 box	33.5	115V	14	350
TSX70086DRAKCR	700 box	33.5	208-230V	14	350

TSX with factory-installed access card, two shelves of sliding drawer racks, including boxes					
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*
TSX40086ARAKHID	400 box	19.4	115V	8	200
TSX40086DRAKHID	400 box	19.4	208-230V	8	200
TSX50086ARAKHID	500 box	24.1	115V	10	250
TSX50086DRAKHID	500 box	24.1	208-230V	10	250
TSX60086ARAKHID	600 box	28.8	115V	12	300
TSX60086DRAKHID	600 box	28.8	208-230V	12	300
TSX70086ARAKHID	700 box	33.5	115V	14	350
TSX70086DRAKHID	700 box	33.5	208-230V	14	350

*2-inch fiberboard boxes with 100-count cell dividers

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Thermo Scientific™ TSX Series Ultra-Low Freezers

Racks for Boxes and Microplates

Racks for 2" (5.08 cm) Boxes							
Model No.	Description	Dimensions H x W x D in. (cm)	Storage	TSX40086	TSX50086	TSX60086	TSX70086
920090	Sliding Drawer Rack	11.9 x 5.5 x 26.9 (30.2 x 14 x 68.3)	Boxes Per Rack	25	25	25	25
			Racks Per Shelf	4	5	6	7
			Racks Per Freezer	16	20	24	28
			Boxes Per Freezer	400	500	600	700
1950520	Adjustable Side Access Rack	11.6 x 5.4 x 26.75 (29.5 x 13.7 x 67.9)	Boxes Per Rack	25	25	25	25
			Racks Per Shelf	4	5	6	7
			Racks Per Freezer	16	20	24	28
			Boxes Per Freezer	400	500	600	700

Racks for 3" (7.62 cm) Boxes							
Model No.	Description	Dimensions H x W x D in. (cm)	Storage	TSX40086	TSX50086	TSX60086	TSX70086
920091	Sliding Drawer Rack	11.9 x 5.5 x 26.9 (30.2 x 14 x 68.3)	Boxes Per Rack	15	15	15	15
			Racks Per Shelf	4	5	6	7
			Racks Per Freezer	16	20	24	28
			Boxes Per Freezer	240	300	360	420

Racking Shelf Kits					
Description	Storage	TSX40086	TSX50086	TSX60086	TSX70086
Sliding Drawer Racks and 2" Boxes with 100 Count Cell Dividers (fits one shelf)	Model No.	RSK400SD4	RSK500SD4	RSK600SD4	RSK700SD4
	Racks Included	4	5	6	7
	Boxes Included	100	125	150	175

Racks for Microplates							
Model No.	Description	Dimensions H x W x D in. (cm)	Storage	TSX40086	TSX50086	TSX60086	TSX70086
1950592	Side Access Rack with Locking Rod for Standard or Deepwell	11.9 x 5.5 x 25.7 (30.2 x 14 x 65.3)	Plates Per Rack	147	147	147	147
			Racks Per Shelf	4	5	6	7
			Racks Per Freezer	16	20	24	28
			Plates Per Freezer	2352	2940	3528	4116

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Thermo Scientific™ TSX Series Ultra-Low Freezers

Boxes

Model No.	Description	# of Divisions	Quantity	Color
5026-0909	Thermo Scientific™ Nalgene™ polycarbonate 2" (5.08 cm) box for 1.2-2.0 mL vials	81	24	white
5954	2" (5.08 cm) fiberboard box	0	12	white
820002	2" (5.08 cm) fiberboard box	81	1	white
820109	2" (5.08 cm) fiberboard box	100	1	white
5956	3" (7.62 cm) fiberboard box	0	12	white
820003	3" (7.62 cm) fiberboard box	81	1	white
1950878	2" (5.08 cm) fiberboard box	0	12	multiple
1950879	2" (5.08 cm) fiberboard box	0	12	pink
1950880	2" (5.08 cm) fiberboard box	0	12	red
1950881	2" (5.08 cm) fiberboard box	0	12	yellow
1950882	2" (5.08 cm) fiberboard box	0	12	green
1950883	2" (5.08 cm) fiberboard box	0	12	blue
1950884	2" (5.08 cm) fiberboard box	0	12	black

Fiberboard Dividers

Model No.	Description	Quantity/Case
5958	Grid dividers for 100 12mm vials	12
6212	Grid dividers for 81 13mm vials	12
5960	Grid dividers for 64 14mm vials	12
5959	Grid dividers for 49 16mm vials	12

Vials and Tubes

Model No.	Description	Quantity/Case
377267	Thermo Scientific™ Nunc™ 1.8mL screw-top round-bottom vials with internal threading	1,800

Visit thermofisher.com for additional vials, tubes and sample storage consumables

Thermo Scientific™ TSX Series Ultra-Low Freezers

Sliding Drawer Racks for Matrix and Cryobank Tubes

		Freezer Model	TSX40086	TSX50086	TSX60086	TSX70086
200 µL Capacity Tubes						
3747, 3748, 4988	Thermo Scientific™ Matrix™ 200 µL 2D Internally-threaded Universal Tubes Box Dimension: 3.365 x 5.03 x 1.082 in. (8.5 x 12.8 x 2.75 cm)	Rack Model No	1950787	1950787	1950787	1950787
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
		Tubes per Box	96	96	96	96
		Boxes Per Rack	56	56	56	56
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	86,016	107,520	129,024	150,528
500 µL Capacity Tubes						
3734, 3735, 4898	Thermo Scientific Matrix 500 µL 2D Open Top Tubes Box Dimension: 3.365 x 5.03 x 1.022 in. (8.5 x 12.8 x 2.6 cm)	Rack Model No	1950787	1950787	1950787	1950787
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
3736, 3737, 4899	Thermo Scientific™ Matrix™ 200 µL 2D with Duraseals Installed Internally-threaded Universal Tubes Box Dimension: 3.365 x 5.03 x 1.082 in. (8.5 x 12.8 x 2.75 cm)	Tubes per Box	96	96	96	96
		Boxes Per Rack	56	56	56	56
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	86,016	107,520	129,024	150,528
374086, 374087 (including color options)	Thermo Scientific Nunc™ Cryobank™ 500 µl Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 1.394 in. (8.5 x 12.8 x 3.5 cm)	Rack Model No	1950791	1950791	1950791	1950791
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
3743, 3744, 3745 (including color options)	Thermo Scientific Matrix 500 µL 2D Internally Threaded ScrewTop Tubes Box Dimension: 3.365 x 5.03 x 1.745 in. (8.5 x 12.8 x 4.4 cm)	Tubes per Box	96	96	96	96
		Boxes Per Rack	42	42	42	42
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	64,512	80,640	96,768	112,896

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Thermo Scientific™ TSX Series Ultra-Low Freezers

Sliding Drawer Racks for Matrix and Cryobank Tubes

		Freezer Model	TSX40086	TSX50086	TSX60086	TSX70086
750 µL Capacity Tubes						
3731, 3732, 4896	Thermo Scientific Matrix 750 µL 2D Open Top Tubes Box Dimension: 3.365 x 5.03 x 1.55 in. (8.5 x 12.8 x 3.9 cm)	Rack Model No	1950791	1950791	1950791	1950791
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
3729, 4896	Thermo Scientific Matrix 750 µL 2D Tubes with Duraseals Installed Box Dimension: 3.365 x 5.03 x 1.55 in. (8.5 x 12.8 x 3.9 cm)	Tubes per Box	96	96	96	96
		Boxes Per Rack	42	42	42	42
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	64,512	80,640	96,768	112,896
1.0 mL Capacity Tubes						
374088, 374089 (including color options)	Thermo Scientific Nunc Cryobank 1.0 mL Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Rack Model No	1950642	1950642	1950642	1950642
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
		Tubes per Box	96	96	96	96
		Boxes Per Rack	35	35	35	35
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
Tubes Per Freezer	53,760	67,200	80,640	94,080		
3740, 3741, 3742 (including color options)	Thermo Scientific Matrix 1.0mL 2D Internally Threaded ScrewTop Tubes Box Dimension: 3.365 x 5.03 x 2.3 in. (8.5 x 12.8 x 5.8 cm)	Rack Model No	1950799	1950799	1950799	1950799
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
		Tubes per Box	96	96	96	96
		Boxes Per Rack	28	28	28	28
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
Tubes Per Freezer	43,008	53,760	64,512	75,264		

Find out more at thermofisher.com/tsx

Thermo Scientific™ TSX Series Ultra-Low Freezers

Sliding Drawer Racks for Matrix and Cryobank Tubes

		Freezer Model	TSX40086	TSX50086	TSX60086	TSX70086
1.4 mL Capacity Tubes						
3791, 3792, 4890	Thermo Scientific Matrix 1.4ml 2D Open Top Tubes Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Rack Model No	1950642	1950642	1950642	1950642
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
3801, 4890	Thermo Scientific Matrix 1.4mL 2D Tubes with Duraseals Installed Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Tubes per Box	96	96	96	96
		Boxes Per Rack	35	35	35	35
3711, 3112, 4890	Thermo Scientific Matrix 1.4ml Human Readable Open Top Tubes Installed Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	53,760	67,200	80,640	94,080
1.8 to 2.0 mL Capacity Tubes						
374500, 374501	Thermo Scientific Nunc 1.8 mL Externally-threaded Universal Tubes Box Dimension: 3.365 x 5.03 x 2.15 in. (8.5 x 12.8 x 5.5 cm)	Rack Model No	1950642	1950642	1950642	1950642
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
374221, 374223	Thermo Scientific Nunc Cryobank 2.0 ml Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 2.15 in. (8.5 x 12.8 x 5.5 cm)	Tubes per Box	48	48	48	48
		Boxes Per Rack	35	35	35	35
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	26,880	33,600	40,320	47,040
5.0 mL Capacity Tubes						
374220, 374222	Thermo Scientific Nunc Cryobank 5.0 ml Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 3.78 in. (8.5 x 12.8 x 9.6 cm)	Rack Model No	1950819	1950819	1950819	1950819
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
		Tubes per Box	48	48	48	48
		Boxes Per Rack	21	21	21	21
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	16,128	20,160	24,192	28,224

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